

Application No. 09/750,264
Reply to Office Action Mailed Jan. 11, 2005

AMENDMENTS TO THE CLAIMS

The following claims replace all prior versions and listings of claims in the application:

Claims 1-6 (cancelled).

7 (Currently Amended). A method for reducing data loss in the event of packet loss in a modem relay connection over a packet network including a transmitting modem and a transmitting gateway, a receiving modem and a receiving gateway, the method comprising ~~the steps of~~:

providing a packet format including a header portion, a sequence number and a data portion;

dividing said data portion into a plurality of segments;

designating one of said segments as a new data segment;

providing sequential blocks of modem data from said transmitting modem to said transmitting gateway;

retaining a predetermined number of sequential blocks of modem data at said transmitting gateway, by dropping the oldest block and retaining the most recent block;

providing the most recent block of data in said designated new data segment of said data portion of said packet;

providing the remaining retained blocks of data in the remainder of said segments; wherein:

each time said transmitting gateway receives a new block of data

Application No. 09/750,264
Reply to Office Action Mailed Jan. 11, 2005

from said transmitting modem, said oldest block is dropped from said retained set of data,

said new block of data is encoded in the next data packet as the new data block; and

said remaining retained blocks are encoded into said data packet as redundant data blocks; and

transmitting said packets from said transmitting gateway to said receiving gateway.

8. (Currently Amended) The method of claim 7, wherein said lost packet recovery at said receiving gateway includes ~~the steps of:~~

receiving said transmitted packets;

reading said sequence numbers of consecutively received packets to determine packet loss, including;

comparing the sequence number of sequentially received packets, and

determining the difference in the compared sequence numbers; and

providing the redundant data corresponding to ~~said designated new data segment data lost during said packet loss, to said receiving modem[[:]]~~

~~additionally providing the data corresponding to the next most recent blocks of data equal in number to one less than the value of said determined difference in the compared sequenced numbers, to acquire data blocks corresponding to the determined~~

Application No. 09/750,264
Reply to Office Action Mailed Jan. 11, 2005

lost packets.

9 (original). The method of claim 8, wherein the number of said retained predetermined number of sequential blocks is re-negotiated when said number of detected missing packets exceeds said retained predetermined number of sequential blocks between the two gateway's gateways.

10 (original). The method of claim 9, further including detection of a value of the number of lost packets which exceeds the value of said retained predetermined number of sequential blocks; said receiving gateway reporting said detection; adjusting the redundancy to compensate for increases in packet loss across said packet network.

11. (New) A method for reducing data loss in the event of packet loss in a modem relay connection over a packet network, comprising:

providing a packet format including a header portion, a sequence number and a data portion; dividing said data portion into a plurality of segments; providing new data in at least one of said segments; providing redundant data in at least one other of said segments, wherein said

Application No. 09/750,264
Reply to Office Action Mailed Jan. 11, 2005

redundant data corresponds to new data of at least four packets having previous sequence numbers;

reading said sequence numbers of consecutively received packets to determine packet loss;

retrieving redundant data from subsequent packets if packet loss is determined; and

reading non-redundant data segments within said received packets in consecutive order while discarding said redundant data if no packet loss is determined.

12. (New) The method of claim 11, further comprising:

establishing a redundancy format for a given modem relay connection including:

negotiating a repetition count value;

providing said repetition count value to each end of said modem relay connection.

13. (New) The method of claim 12, wherein said repetition count value is dependant upon the characteristics of said packet network.

14. (New) The method of claim 11, wherein said establishing a redundancy format further includes:

Application No. 09/750,264
Reply to Office Action Mailed Jan. 11, 2005

negotiating a whole number value for the number of new bytes in each data packet.

15. (New) The method of claim 12 wherein said repetition count is re-negotiated when the packet loss number exceeds said repetition count.

16. (New) The method of claim 15, further including:
detection of a value of the number of lost packets which exceeds the value of said repetition count;
said receiving gateway reporting said detection;
adjusting said repetition count to compensate for increases in packet loss across said packet network.